## REMARKS

The Office Action mailed August 23, 2007 has been carefully considered by Applicant. Reconsideration is respectfully requested in view of the foregoing claim amendments and the remarks that follow.

Claims 1-10 have been rejected under 35 U.S.C. §102(e) as being anticipated by Peterman et al U.S. Patent No. 6,325,159.

By the present Amendment, claims 1-10 are cancelled and new claims 11-29 added to more particularly point out and distinctly claim the subject matter of the present invention. Claims 11-29 are believed clearly allowable over the cited reference.

### Claim 11

Claim 11 recites a method for replacing liquid in a riser during connection and disconnection of the riser and a subsea wellhead. The method is particularly useful for replacing drilling fluid and/or other contaminated fluid in the riser prior to disconnection of the riser from the subsea wellhead to prevent contamination to the environment. Typically, this is done by pumping water down to the wellhead through the external smaller pipes provided at the wellhead, so that the water displaces the drilling fluid out of the riser into collecting tanks on the drilling vessel. Then the riser is disconnected from the wellhead. There is a problem with known methods, however, because such replacing of fluid in the riser, in the area of contact of the two fluids, causes a considerable mixing of fluids. Drilling fluid, therefore, becomes contaminated with water. Purification or destruction of such contaminated fluid is relatively expensive.

According to the method of claim 11, a body is connected to the drill pipe and includes a sealing surface that is configured to displaceably seal against an inner wall of the riser and therefore divide the riser into separate upper and lower sections. Prior to disconnection of the riser from the subsea wellhead, the drill pipe and body are moved together downwardly in the riser towards the wellhead to reduce the volume in the lower riser section and thus force fluid out of the lower riser section, preferably via smaller

pipes attached to the wellhead. Thereafter, the wellhead is closed and the riser is disconnected from the closed wellhead.

The Examiner cites Peterman et al '159 as anticipating the claimed method. However, simply stated, there is no teaching or motivation in Peterman et al '159 to follow the method steps of claim 11.

Peterman et al '159 is directed to purposes that are completely unrelated to the present application. Peterman et al '159 discloses a system for maintaining a selected pressure gradient in a well annulus, see column 5, lines 62-63. For this purpose, the annulus of the riser 52 is isolated from the well annulus 66 by diverters 106 and 108 shown in detail in Figs. 3b and 4a, see column 8, lines 37-39. The return mud from the well annulus 66 is then pumped by means of pumps 102 through mud return lines 56, 58 to the vessel 12, see column 9, lines 58-60. The mud pumps 102 are connected to the mud chamber of the pressure balanced tank 42, see column 14, lines 44-48. Peterman et al '159 does acknowledge that there is a problem with contamination resulting from well fluids, see column 3, lines 30-34. However, according to the system and methods taught by Peterman et al '159, the riser 52 is filled with sea water, see columns 8, lines 57-60. The need for a change of fluid in the riser of Peterman et al '159 does not exist.

Peterman et al '159 does not teach or suggest the step of connecting the body to the drill string, per claim ll. The piston 236 cited by the Examiner is not connected to the drill pipe. In fact it is not even in contact with the drill pipe 60, but instead is freely movable in the annular chamber 235 of the pressure-balanced tank 42 and responds to pressure differentials, see column 14, lines 49-52. Under paragraph 2 of the Detailed Action, the Examiner states: "...replacing liquid in a riser (52 & 42 which includes 230 of the kind ...). This is incorrect. Although the cylindrical body 230 of the pressure-balanced mud tank 42 is positioned around the bore 231 of the drill string 60, it is not a functional part and not associated with the riser 52. The Examiner continues to state "...that the body (236) which is arranged to keep the liquids separate and is connected to the drill pipe (60), is displaced ...". This is positively incorrect. According to Peterman

et al '159, the annular pistons 236 of Figures 2c or 267 of Figure 6 are not even in contact with the drill pipe 60.

Peterman et al '159 does not teach or suggest the step of moving the drill pipe and the body together downwardly in the riser, per claim 11. The pressure-balanced tank 42 noted by the Examiner does not communicate with the riser 52 and is functionally not a part of the riser 52 even though it is encircling the bore 231 for the drill string 60. This feature is emphasized by an alternative embodiment wherein the pressure-balanced tank 42 is exchanged for a smaller pressure-balanced mud tank 234 of Figure 6, see column 15, lines 44-50. In Figure 6, there appears to be an incorrect reference as the numeral 264 references the tank. Also, the annular piston 236 according to Peterman et al '159 is not positioned inside a riser 52 or the bore 231 for the drill string 60, but instead is outside the bore 231 between walls 238, 240 in the annular chamber 235 of the pressure-balanced mud tank 42.

In view of the comments provided above, Applicant believes strongly that the apparatus and methods taught by Peterman et al '159 do not anticipate or render obvious the method of claim 11. Withdrawal of the rejection of claim 11 is therefore believed appropriate.

Claims 12-21

Claims 12-21 define additional method steps and are also not taught by Peterman et al '159. In fact, Peterman et al '159 is so far removed from the method of claim 11 that further comment regarding claims 12-21 is not believed necessary.

Claim 22

Claim 22 recites the method for replacing liquid in a riser and includes the step of connecting the body to the drill pipe, the body comprising a sealing surface that is configured to displaceably seal against an inner wall of the riser and thereby divide the interior of the riser into separate upper and lower sections. The drill pipe and body are moved together upwardly in the riser away from the wellhead so that the body draws fluid into the lower riser section. This is useful for attachment of the riser to the wellhead and,

according to the comments noted above, is clearly not taught by the art, including Peterman et al '159.

Claims 23-26

Claims 23-26 depend directly or indirectly from claim 22 and are thus also believed allowable for the reasons stated above, as well as the detailed subject matter recited therein, which is further not found in the art.

Claim 27

Claim 27 recites a system for replacing liquid in a riser during connection and disconnection. Similar to the method claims discussed above, the system includes a body connected to a drill pipe that comprises a sealing surface that is configured to displaceably seal against an inner wall of the riser and thereby divide the interior of the riser into separate upper and lower sections. The body and drill pipe are movable together upwardly and downwardly to force fluid into and out of the lower section of the riser. This system is especially useful for connecting and disconnecting the riser to the subsea wellhead, as detailed above, and is not taught or suggested by the art.

Briefly, Peterman et al '159 does not teach the claimed "body connected to a drill pipe", the "drill pipe and body configured to move downwardly together in the riser towards the wellhead", or the "drill pipe and body configured to move upwardly together in the riser towards the wellhead" per claim 27.

Claims 28 and 29

Claims 28 and 29 depend from claim 27 and are thus believed allowable for the reasons stated above, as well as the detailed subject matter recited therein.

Conclusion

The present Application is thus believed in condition for allowance with claims 11-29. Such action is respectfully requested.

Respectfully submitted,

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